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SUBJECT: NICARAGUA: RESPONSE TO LATIN AMERICA-CARIBBEAN
BIOFUELS INITIATIVE

REF: A. STATE 164558
[1](#)B. MANAGUA 02051

[1](#)1. (U) Summary: Nicaragua's energy sector is heavily dependent upon imported oil for electricity production. High oil prices and poor regulation of the energy sector have left electricity producers and distributors with empty pockets and consumers without electricity. Nicaragua's climate and soil are well suited to sugar cane production and experts predict that within five years production will increase by 90% to a total of 100,000 hectares. The country's first ethanol plant will begin operation in November 2006, producing 18 million liters of ethanol for export to Europe. An African palm-based biodiesel will hit the local market within a year and a second biodiesel from oleaginous plants will be commercially available in 2008. Experts worry, nonetheless, that market pressures will drive investors away from biofuels and into more profitable markets. Without incentives from the GON to pursue alternative fuel sources and a regulatory framework to support the long-term growth and success of biofuels, the fledgling biofuels sector may never take hold.
End Summary.

Energy Production, Distribution, and Use

[1](#)2. (U) Nicaragua is heavily dependent upon imported petroleum for electricity production. The country generates almost 70% of its electricity from heavy fuel oil or diesel. Despite huge potential, hydro-power accounts for only 15% of electricity installed capacity, but production this year has fallen to 10% as a result of drought. Other "green" energy sources such as geothermic and burning of bagasse (biowaste from sugar cane harvest) generate 15% of electricity production. Most industrial enterprises and the heavy transportation sector are fueled by diesel. Cars and light trucks use gasoline; ethanol is not available on the local market.

[1](#)3. (U) Nicaragua partially privatized its energy sector in 2001 and privately-owned companies now account for 60% of production and almost 100% of distribution. The regulator, INE (the National Energy Institute), a creature of the National Assembly and headed by a politician, has not managed the sector well, creating an inhospitable environment for growth. INE administers electricity prices and issues tenders for power production, but has failed to adequately deal with rising oil prices, aging infrastructure, and growing local demand. In addition, two-thirds of all customers qualify for free electricity through a subsidy that must be borne either by paying customers or the government. The National Assembly has not appropriated sufficient funds to subsidize the sector, putting great financial strain on the industry. Compounding the problem this year has been unexpected maintenance on one power plant and low rainfall

along the river basin behind the country's largest hydroelectric dam. The result has been chronic blackouts and power rationing throughout the country.

Sugar Production Booming with Great Potential to Expand

¶4. (U) Nicaragua is the third largest sugar producer in Central America. Its soil and climate are well suited to the task. Annual rain falls provide most of the water needed for growing. Production yields are among the highest in Central America at more than 119 metric tons of sugar cane per hectare with an average of 225 pounds of sugar per metric ton of sugar cane (compared to an average of 269 pounds per metric ton in the United States). According to the Ministry of Labor, the sugar sector employs 35,000 people in the fields and supports an additional 100,000 jobs nationwide. Many consider Nicaragua's sugar industry to be the best-organized in the country.

¶5. (U) Nicaragua's four large scale sugar plantations and four sugar mills are concentrated along the Pacific Coast. San Antonio (of the Pellas Group) is the largest producer of sugar cane, with more than 28,800 hectares under production. The second largest producer, Monte Rosa, has 21,000 hectares under production. The two remaining significant producers, Montelimar and Benjamin Zeledon, cultivate 5,000 and 3,000 hectares, respectively. The Ministry of Agriculture and Forestry (MAGFOR) estimates that an additional 42,000 hectares of fallow land could potentially produce sugar cane. Experts predict that within five years, a total of 100,000 hectares will be utilized for sugar production, resulting in an almost 90% increase over current production levels.

¶6. (U) The vast majority of sugar cane in Nicaragua is harvested by hand, using a method that involves the burning of sugar cane fields before harvest. New MAGFOR technical norms, however, set burn limits to control pollution. As a result, mechanized harvesting is becoming more prevalent. Industry insiders expect that within three years, 70% of sugar cane will be harvested mechanically and that this will increase the average yield per metric ton. All four sugar mills burn bagasse to generate electricity. Together, they sell 60 megawatts to a local, independent power producer.

Technical Skills

¶7. (U) Nicaragua's total labor force, estimated at 2 million workers in July 2005, is largely rural and unskilled. Critical shortages of skilled technicians and managerial personnel present significant challenges to industry. An estimated 30% of the employed population works in the agricultural sector, 52% in services, and 18% in manufacturing. A senior engineer for a Spanish construction company working in Nicaragua told Econoff that his company delayed the start of a major project by three months to search for mid-level mechanical and industrial engineers, as well as project managers. Eventually, the company filled half of the available jobs with workers from Spain. A dearth of qualified individuals to work on biofuels development and ethanol plants could pose a problem for the advancement of alternative energy.

Bio-Refineries and the Environment

¶8. (U) A 1994 environmental standards law requires that certain industries (i.e., leather, dairy, sugar, forestry, and meat processors) submit for approval environmental impact statements to the Ministry of Environment and Natural Resources (MARENA). The list of industries is not comprehensive and many sectors, including bio-refineries, currently operate without environmental oversight. A revised version of the 1994 law, which would require all industries to submit environmental impact statements, will go to the President in November for approval. A MARENA insider doubts, however, that the President will ratify the proposed changes

because they do not sufficiently centralize authority over the regulatory process.

Infrastructure: Ports, Roads, and Transportation

¶9. (U) Nicaragua has no major port on the Atlantic coast, so most shippers use Puerto Cortes in Honduras. Ground shipments to and from Puerto Cortes, however, are increasingly at risk of being hijacked. On the Pacific Coast, the small Nicaraguan Port of Corinto is capable of handling liquid cargo. Ground transportation from east to west is extremely difficult. There are few paved roads linking the Pacific and the Atlantic coasts and, those that exist are in poor condition. Generally, ground transportation for heavy cargo to and from ports is readily available.

Nicaragua to Produce Ethanol for Export

¶10. (U) In November 2006, Nicaragua's first ethanol plant will begin operation. The Pellas Group, owner of Nicaragua's largest sugar plantation and the country's only sugar refinery, invested more than \$4 million in the development of a Pacific coast ethanol plant. The company holds a one-year contract with a single buyer in Europe, who will purchase all 18 million liters produced. A Pellas Group spokesperson suggested that Pellas is poised to expand production if the ethanol plant was successful in its first year. To date, the company has no plans to distribute ethanol domestically.

¶11. (U) Existing infrastructure could support the transport, storage, and export of up to three times the Pellas Group's estimated annual production of 18 million liters. The ethanol plant is 18 miles from the Port of Corinto, which has a 7 million liter storage capacity dedicated to ethanol. At current production levels, Pellas will need less than half of this storage capacity at any given time. Pellas plans to transport ethanol from the plant to the Port of Corinto in 28,000 liter tanker trucks, which it has no difficulties procuring.

Biodiesels: Coming Soon

¶12. (U) Another private enterprise, Agroindustrias de Occidente (AGRINOSA), is venturing into the biofuels market with an African Palm-based biodiesel. AGRINOSA has yet to commercialize its product and is months away from completing the paperwork needed to enter the local market. AGRINOSA will sell the biodiesel to factories and heavy transportation vehicles (two industries that are almost 100% dependent on diesel consumption). A 2005 AGRINOSA study of the energy market estimated current domestic demand for biodiesel at 5.6 million liters per month. AGRINOSA is capable of producing 1.4 million liters per month, or 25% of current demand.

¶13. (U) Grupo Cohen, a prominent Nicaraguan investment group, has visions of joining AGRINOSA in the biodiesel market. They are launching a pilot project to produce biodiesel from oleaginous plants (i.e. soybean, sunflower, and peanuts). Estimated production capacity is 1.8 million liters per year and pilot production should begin within the coming months. Grupo Cohen is not committed to a definite timeline, but hope to make its product available commercially by mid 2008. Neither AGRINOSA nor Grupo Cohen plan to export biodiesel.

Challenges to Biofuel Development

¶14. (U) While the biofuel industry has attracted some private investment, a 2005 study by the Instituto Interamericano de Cooperacion para la Agricultura (IICA) and MAGFOR suggests that the GON will need to take a leading role in alternative energy production to sustain long-term production. The study criticized the GON for its "lack of political will" to move

ethanol or biodiesels forward, pointing to an absence of incentives for biofuel production or use.

¶15. (U) Experts fear that investors will abandon biofuels for more profitable markets if the GON does not provide incentives for alternative fuel production. In 2005, for example, the Pellas Group invested in a new distillery and alcohol dehydrator to produce ethanol on a trial basis and earmarked 8,000 metric tons of sugar cane for the project. When international sugar prices skyrocketed, the company stopped ethanol production and processed the cane for sugar export. Without stable prices and incentives to stay in the ethanol market, the industry may never develop.

¶16. (U) Pedro Silva de la Maza, project director for San Antonio, echoed these concerns. He believes that cooperation among GON institutions is weak and that the biofuels industry needs "collaboration and joint planning between the forestry, agricultural, and energy sectors" if it is to materialize. The problem, he points out, is that "these ministries are challenged with immediate problems and have few resources to deal with advancing ethanol production."

¶17. (U) Comment: Nicaragua is heavily dependent on imported oil and suffers when oil prices rise. In July 2006, violent demonstrations erupted throughout the capital when rising fuel prices forced bus companies to increase fares. Frequent and prolonged blackouts spurred protests throughout the country in August and September. Ethanol production could go a long way toward alleviating the country's dependency upon foreign oil and reducing imports. Nicaragua has a well-developed sugar industry, available fallow land, and existing private investment in ethanol and biofuels production. Without incentives from the GON to pursue alternative fuel sources and a regulatory framework to support the long-term growth and success of biofuels, the fledgling biofuels sector may never take hold. End Comment.
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